

Foams composed of water-absorbing basic polymers and preparation and use thereof

5 Abstract

Foams composed of water-absorbing basic polymers, obtainable by

- 10 (I) foaming a crosslinkable aqueous mixture including
- (a) at least one basic polymer whose basic groups have optionally been neutralized,
 - (b) at least one crosslinker,
 - (c) at least one surfactant,
 - 15 (d) optionally at least one solubilizer,
 - (e) optionally thickeners, foam stabilizers, fillers, fibers and/or cell nucleators, and
 - (f) optionally particulate water-absorbing acidic polymers,
- 20 by dissolving a gas which is inert toward free radicals in the crosslinkable aqueous mixture under a pressure from 2 to 400 bar and subsequently decompressing the crosslinkable aqueous mixture to atmospheric or by dispersing fine bubbles of a gas which is inert toward free radicals, and
- 25 (II) crosslinking the foamed mixture to form a hydrogel foam and if applicable adjusting the water content of the polymer foam to 1-60% by weight.
- 30 Preparation of the foams by application of the abovementioned measures (I) and (II) and use of the thus obtainable foams in hygiene articles to absorb body fluids, in dressing material to cover wounds, as a sealing material, as a packaging material, as a soil improver, as a soil substitute, to dewater sludges, to
- 35 absorb aqueous acidic wastes, to thicken waterborne paints or coatings in the course of disposing of residual quantities thereof, to dewater water-containing oils or hydrocarbons or as a material for filters in ventilation systems.

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